

IN THE CLAIMS:

Please amend the following claims:

1. (Amended) A fusion transcript consisting of a homologue cross-over between two different genes with more than 80% sequence homology in certain regions, in particular regions of cross-over.
2. (Amended) A fusion transcript according to claim 1, wherein the two genes are the genes of SCCA1 and SCCA2.
3. (Amended) A full length fusion transcript protein between SCCA1 and SCCA2 having switched reactive site loops compared to basic promoter.
4. (Amended) A substantially full length fusion transcript protein between SCCA1 and SCCA2 having switched reactive site loops compared to basic promoter.
5. (Original) A fusion protein according to claim 4 coded by one or more of exons 2 - 7 of SCCA1 gene fused to exon 8 of SCCA2 gene.
6. (Original) A fusion protein according to claim 1 coded by exon 2 - 7 of SCCA1 gene fused to exon 8 of SCCA2 gene.
7. (Original) A fusion protein according to claim 4 coded by one or more of exons 2 - 7 of SCCA2 gene fused to exon 8 of SCCA1 gene.
8. (Original) A fusion protein according to claim 1 coded by exon 2 - 7 of SCCA2 gene fused to exon 8 of SCCA1 gene.
9. (Original) A fusion protein according to claim 5, wherein the protein sequence is
MNSLSEANTK FMFDLFQQFR KSKENNIFYS PISITSALGM VLLGAKDNTA-
QQIKKVLHFD QVTENTTGKA ATYHVDRSGN VHHQFQKLLTE FNKSTDAYE

LKIANLKFGE KTYLFLQEYL DAIKKFYQTS VESVDFANAP EESRKKINSW
VESQTNEKIK NLIPEGNIGS NTTLVLVNAI YFKGQWEKKF NKEDTKEEF
WPNKNTYKSI QMMRQYTSFH FASLEDVQAK VLEIPYKGKD LSMIVLLPNE
IDGLQKLEEK LTAEKLMEWL SLQNMRETCV DLHLPRFKME ESYDLKDTLR
TMGMVNIFNG DADLSGMTWS HGLSVSKVLH KAFVEVTEEG VEAAAATAVV
VVELSSPSTN EEFCCNHPFL FFIRQNKTNS ILFYGRFSSP

10. (Original) A DNA sequence coding for a fusion SCCA1/SCCA2 protein.

11. (Original) A DNA sequence comprising the nucleotide sequence of exon 2 – 7 of SCCA1 fused to the nucleotide sequence of exon 8 of SCCA2.

12. (Original) A DNA sequence according to claim 11, wherein the nucleotide sequence is
ATGAATTCAC TCAGTGAAGC CAACACCAAG TTCATGTTTCG ACCTGTTCCA
ACAGTTCAGA AAATCAAAAG AGAACAACAT CTTCTATTCC CCTATCAGCA
TCACATCAGC ATTAGGGATG GTCCTCTTAG GAGCCAAAGA CAACACTGCA
CAACAGATTA AGAAGGTTCT TCACTTTGAT CAAGTCACAG AGAACACCAC
AGGAAAAGCT GCAACATATC ATGTTGATAG GTCAGGAAAT GTTCATCACC
AGTTTCAAAA GCTTCTGACT GAATTCAACA AATCCACTGA TGCATATGAG
CTGAAGATCG CCAACAAGCT CTTGCGAGAA AAAACGTATC TATTTTACA
GGAATATTTA GATGCCATCA AGAAATTTTA CCAGACCAGT GTGGAATCTG
TTGATTTTGC AAATGCTCCA GAAGAAAGTC GAAAGAAGAT TAACTCCTGG
GTGGAAAGTC AAACGAATGA AAAAATTAAA AACCTAATTC CTGAAGGTAA
TATTGGCAGC AATACCACAT TGGTTCTTGT GAACGCAATC TATTTCAAAG
GGCAGTGGGA GAAGAAATTT AATAAAGAAG ATACTAAAGA GGAAAAATTT
TGGCCAAACA AGAATACATA CAAGTCCATA CAGATGATGA GGCAATACAC
ATCTTTTCAT TTTGCCTCGC TGGAGGATGT ACAGGCCAAG GTCCTGGAAA
TACCATACAA AGGCAAAGAT CTAAGCATGA TTGTGTTGCT GCCAAATGAA
ATCGATGGTC TCCAGAAG CT TGAAGAGAAA CTCCTGCTG AGAAATTGAT
GGAATGGACA AGTTTGCAGA ATATGAGAGA GACATGTGTC GATTTACACT
TACCTCGGTT CAAAATGGAA GAGAGCTATG ACCTCAAGGA CACGTTGAGA

ACCATGGGAA TGGTGAATAT CTTCAATGGG GATGCAGACC TCTCAGGCAT
GACCTGGAGC CACGGTCTCT CAGTATCTAA AGTCCTACAC AAGGCCTTTG
TGGAGGTCAC TGAGGAGGGA GTGGAAGCTG CAGCTGCCAC CGCTGTAGTA
GTAGTCGAAT TATCATCTCC TTCAACTAAT GAAGAGTTCT GTTGTAATCA
CCCTTTCCTA TTCTTCATAA GGCAAAATAA GACCAACAGC ATCCTCTTCT
ATGGCAGATT CTCATCCCCA

13. (Amended) A plasmid comprising the nucleotide sequence corresponding to one or more of exons 2 - 7 of SCCA1 gene fused to exon 8 of SCCA2 gene.

14. (Amended) A plasmid comprising the nucleotide sequence corresponding to exons 2 - 7 of SCCA1 fused to the nucleotide sequence of exon 8 of SCCA2.

15. (Amended) A plasmid comprising the nucleotide sequence corresponding to one or more of exons 2 - 7 of SCCA2 gene fused to exon 8 of SCCA1 gene.

16. (Amended) A plasmid comprising the nucleotide sequence corresponding to exons 2 - 7 of SCCA2r gene fused to exon 8 of SCCA1 gene.

17. (Amended) A plasmid according to [~~claims 13-14~~] claim 13, comprising the nucleotide sequence: of claim 12 ATGAATTCAC TCAGTGAAGC CAACACCAAG TTCATGTTCCG
ACCTGTTCCA ACAGTTCAGA AAATCAAAAG AGAACAACAT CTTCTATTCC
CCTATCAGCA TCACATCAGC ATTAGGGATG GTCCTCTTAG GAGCCAAAGA
CAACACTGCA CAACAGATTA AGAAGGTTCT TCACTTTGAT CAAGTCACAG
AGAACACCAC AGGAAAAGCT GCAACATATC ATGTTGATAG GTCAGGAAAT
GTTTCATCACC AGTTTCAAAA GCTTCTGACT GAATTCAACA AATCCACTGA
TGCATATGAG CTGAAGATCG CCAACAAGCT CTTCGGAGAA AAAACGTATC
TATTTTACA GGAATATTTA GATGCCATCA AGAAATTTTA CCAGACCAGT
GTGGAATCTG TTGATTTTGC AAATGCTCCA GAAGAAAGTC GAAAGAAGAT
TAACCTCCTGG GTGGAAAGTC AAACGAATGA AAAAATTAAA AACCTAATTC
CTGAAGGTAA TATTGGCAGC AATACCACAT TGGTTCTTGT GAACGCAATC

TATTTCAAAG GGCAGTGGGA GAAGAAATTT AATAAAGAAG ATACTAAAGA
GGAAAAATTT TGGCCAAACA AGAATACATA CAAGTCCATA CAGATGATGA
GGCAATACAC ATCTTTTCAT TTTGCCTCGC TGGAGGATGT ACAGGCCAAG
GTCCTGGAAA TACCATACAA AGGCAAAGAT CTAAGCATGA TTGTGTTGCT
GCCAAATGAA ATCGATGGTC TCCAGAAG CT TGAAGAGAAA CTCACTGCTG
AGAAATTGAT GGAATGGACA AGTTTGCAGA ATATGAGAGA GACATGTGTC
GATTTACACT TACCTCGGT CAAAATGGAA GAGAGCTATG ACCTCAAGGA
CACGTTGAGA ACCATGGGAA TGGTGAATAT CTTCAATGGG GATGCAGACC
TCTCAGGCAT GACCTGGAGC CACGGTCTCT CAGTATCTAA AGTCCTACAC
AAGGCCTTTG TGGAGGTCAC TGAGGAGGGA GTGGAAGCTG CAGCTGCCAC
CGCTGTAGTA GTAGTCGAAT TATCATCTCC TTCAACTAAT GAAGAGTTCT
GTTGTAATCA CCCTTTCCTA TTCTTCATAA GGCAAAATAA GACCAACAGC
ATCCTCTTCT ATGGCAGATT CTCATCCCCA, and deposited at ECACC under deposition
 number ECACC 01031315.

18. (Amended) A protein expression system for production of SCCA1/SCCA2 fusion protein.
19. (Amended) A recombinant bacteria comprising a plasmid according to ~~[claims 13-17]~~ claim 13.
20. (Amended) A recombinant bacteria comprising a plasmid according to claim 14.
21. (Amended) A recombinant E. coli comprising a plasmid according to claim 13.
22. (Amended) A recombinant E. coli comprising a plasmid according to claim 14.
23. (Amended) A method for detecting the gene rearrangement forming the SCCA1/SCCA2 fusion protein using a cDNA cloning and sequencing analysis of tumor DNA.
24. (Amended) A method for detecting the gene rearrangement forming the SCCA2/SCCA1 fusion protein using a cDNA cloning and sequencing analysis of tumor DNA.

25. (Amended) A method for detecting the gene rearrangement forming the SCCA1/SCCA2 fusion protein using a Southern blot-technology applied on tumor DNA.
26. (Amended) A method for detecting the gene rearrangement forming the SCCA2/SCCA1 fusion protein using a Southern blot-technology applied on tumor DNA.
27. (Amended) A method for detecting the gene rearrangement forming the SCCA1/SCCA2 fusion protein using a PCR-analysis technology.
28. (Amended) A method for detecting the gene rearrangement forming the SCCA2/SCCA1 fusion protein using a PCR-analysis technology.
29. (Amended) A method for detecting the gene rearrangement forming the SCCA1/SCCA2 fusion protein using an amino acid sequencing technology.
30. (Amended) A method for detecting the gene rearrangement forming the SCCA2/SCCA1 fusion protein using an amino acid sequencing technology.
31. (Amended) A method for detection the SCCA1/A2 fusion protein using Western blotting.
32. (Amended) A method for detection the SCCA2/AI fusion protein using Western blotting.
33. (Amended) A monoclonal antibody specific for SCCA1/SCCA2 fusion protein.
34. (Amended) A monoclonal antibody specific for SCCA2/SCCAZ fusion protein.
35. (Amended) A polyclonal antibody reactive with SCCA1/SCCA2 fusion protein.
36. (Amended) A monoclonal antibody specific for SCCA2/SCCA1 fusion protein.

37. (Amended) An immunoassay using a monoclonal antibody or polyclonal antibody specific for SCCA1/SCCA2 fusion protein for detecting the presence and concentration of SCCA1/SCCA2 fusion protein.

38. (Amended) An immunoassay using a monoclonal antibody or polyclonal antibody specific for SCCA2/SCCA1 fusion protein for detecting the presence and concentration of SCCA2/SCCA1 fusion protein.

39. (Amended) A method for diagnosing the presence or absence of a squamous cell carcinoma by detecting the SCCA1/SCCA2 fusion protein in a human sample.

40. (Amended) A method for diagnosing the presence or absence of a squamous cell carcinoma by detecting the SCCA2/SCCA1 fusion protein in a human sample.

41. (Amended) A method according to [~~claims 39-40~~] claim 39, wherein the fusion protein is used in a histochemical analysis.

42. (Amended) A kit comprising a SCCA1/SCCA2 fusion protein antibody to be used in the determination of the presence or absence of squamous cell carcinoma (SCC).

43. (Amended) A kit comprising a SCCA2/SCCA1 fusion protein antibody to be used in the determination of the presence or absence of squamous cell carcinoma (SCC).

44. (Amended) A kit according to [claim 42-43] claim 42, in that it further comprises antibodies related to SCCA1 and/or SCCA2.